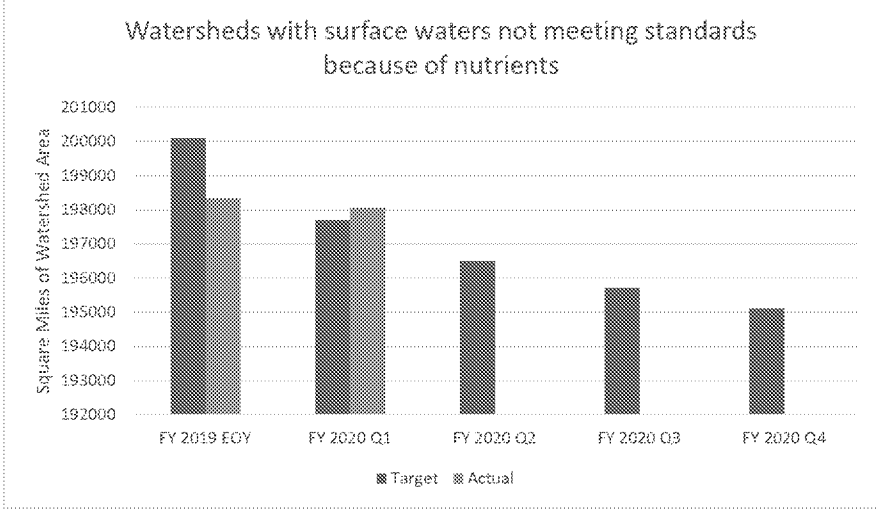
Enterprise Risk: Nutrients

Challenge: Nutrient pollution is one of America's most widespread, costly and challenging environmental problems, and is caused by excess nitrogen and phosphorus in the air and water. When too much nitrogen and phosphorus enter the environment the air and water can become polluted. Nutrient pollution has impacted many streams, rivers, lakes, bays and coastal waters for the past several decades, resulting in serious environmental and human health issues, and impacting the economy.

Opportunities: Working with partners to reduce excess nutrients through 1) market-based approaches; 2) nonpoint source reduction projects; 3) state establishment of TMDL nutrient budgets; and 4) support for state permitting, water infrastructure financing, and monitoring to better document watershed condition and support states in developing and achieving ~~appropriate revisions to~~ water quality standards.

Indicator: Watersheds with surface waters not meeting standards because of nutrients.

- FY 2019 End-of-Year Results: 198,335
- FY 2020 Quarter 1 Results: 198,042



Progress Made:

- In Quarter 1, and additional 4,054 square miles of watersheds with surface waters not meeting standards because of nutrients are now meeting standards ~~impaired by nutrients met standards~~.
- In July 2019, [HYPERLINK "https://u7061146.ct.sendgrid.net/wf/click?upn=G62jSYfZdO-2F12d8lSllQBwT1pSdHMZE0xurXetZGNt-2BRbZH9VIfQEvbpCgNfTmvd45AUbebricue9Ru8aVGdRCbZ5qZPpsgqsgPAwbBCG13iwb8aj6dWOiWJU91zFQG5CoO5ksic-

Commented [WA1]: I'm concerned with the lack of precision here. Is this based on surface waters not meeting numeric nutrient criteria? Narrative standards? Narrative standards specifically for nutrients or narrative "aesthetic" standards translated into nutrient standards? Phosphorus and nitrogen only, or is sediment or other indicator parameters included here too? What form of nitrogen?

Commented [MK2R1]: This metric is included in our bowling chart. To calculate the metric, the following parameters are used in ATTAINS to flag waters impaired by nutrients (which includes nitrate, nitrogen, phosphorous, etc) , and nutrient-related parameters including: algal growth, noxious aquatic plants, and organic enrichment/oxygen depletion.

Commented [WA3]: Consider adding as metrics:
-319 grants focused on reducing excess nutrients in watersheds—this can be dollars spent or acres covered or both
-SRF dollars directed to nonpoint projects that reduce excess nutrients in watersheds
-work we are doing with USDA to collaborate on nonpoint management, source water protection dollars, etc.
- point/nonpoint transactions or water quality trades that resulted in a reduction of nonpoint nutrient contributions to a watershed
- TMDLs, 9 key element plans, or other watershed improvement plans coordinated with or approved by EPA to address nutrients
-State engagement as a metric—how many states is EPA currently providing technical support or contractor dollars to reduce excess nutrients

Commented [MK4R3]: Are you comfortable with moving forward with the metric identified and using the next quarter to develop other metrics that can support quarterly reporting on this risk?

Commented [MK5R3]: Anna's Response: Under future actions can you add building out additional metrics, including… and list the ones (or a couple) that were in my original bubble?

Commented [TD6R3]: Would the last metric include technical support through the N-STEPS program for nutrient criteria development?

Commented [WA7]: Square miles of watersheds is a different metric than the number of watersheds with surface waters. How does this show progress based on the indicator?

Commented [MK8R7]: This bullet is reporting the results of the indicator measure. I've reworked the sentence.

2FHPTBq8H6As03Nb24XG9Z7HPh2E3tJOLlwA-3D_CI01dzKrPTXO1-2FFcg6tHbuoVt2MQnJEZALmLc9IpT2UaUriFxrYN93Zy462ckQT7z5ZHf1vjKt7nBBIlDpaprU2BaTFgXfqrrnGpFe6FnQPERhI4vMFZHiFOmWpaiX1CAfk3lrNFqlQfE-2Br2tnUuFQwF4QTQzOZiiEHnwJhFmkglr0vRaC9CpMH3xwohWGgHaCKY82FGTRn8gLt99tWZvSNEZX-2FuBtdOZiOjBGBu55kLEoOQaDlBMqc1eS8cLuDTe71pyzPpbiFCtdGmbCIrUNpNUGarT9R0x5WNrPb6VWYpcmp65rGF2ahl618cxc8rXiKuaDSSTZLHELEP-2BPMvgPlvyttOu0xW3FWKBpFN6FA-3D"], which uses satellite data to alert users that a harmful algal bloom could be forming based on specific changes in the color of the water in more than 2,000 of the largest lakes and reservoirs across the United States.

- During summer 2019, the EPA and USDA co-hosted a [HYPERLINK "https://www.epa.gov/waterfinancecenter/innovative-financing-strategies-reducing-nutrients"] and a National Nutrient Finance Forum on innovative financing in the public and private sectors that can be used to help reduce excess nutrients.
- In August 2019, the [HYPERLINK "https://u7061146.ct.sendgrid.net/wf/click?upn=G62jSYfZdO-2F12d8lSllQBwT1pSdHMZE0xurXetZGNt-2Bdgg-2F7URzeGWLY-2BcvHjNWuqtcEr4Liv5-2FnF1x-2B8u3XXqH-2Bt8o6CiDE-2BUGxDrm44QNUI9WhAmyBOWGd-2B6u2KgKVlkp4L3n9pNzashdX3-2BksFE0dept6BEKZ-2FDE9rMKI0O4-3D_CI01dzKrPTXO1-2FFcg6tHbuoVt2MQnJEZALmLc9IpT2UaUriFxrYN93Zy462ckQT7z5ZHf1vjKt7nBBIlDpaprU2BaTFgXfqrrnGpFe6FnQPERhI4vMFZHiFOmWpaiX1CAfk3lrNFqlQfE-2Br2tnUuFQwF4QTQzOZiiEHnwJhFmkglr0vRaC9CpMH3xwohWGgHaCKY82FGTRn8gLt99tWZvR-2FEluOghBLVnZppAW3L-2Bbp30eNxqv5n81CzhWYKI3c1Iz9StpMLBZfi9VP5GiuytTdzbTnyiSL6jTZ-2FchoBCRY1PuSKEA5gU-2ByFeX1HzQsCbX9MhojQuIFzSqhjTDUaPDUYUyUeDkSWKxKGp0VcU58-3D"] to fund projects that improve water quality, habitat and environmental education in the Gulf of Mexico watershed.
- In August 2019, the [HYPERLINK "https://u7061146.ct.sendgrid.net/wf/click?upn=G62jSYfZdO-2F12d8lSllQBwT1pSdHMZE0xurXetZGNt83By-2FWaz586EmzKPk8WfDmAMzo4koJhrtvPAJ14o-2B5YM7VDBzwGAkqOQI7NIcjRAwPKo00A-2BKcjhHiAb14ccvo8-2B2DN4hh6ADuUeqOXv9cmQ-3D-3D_CI01dzKrPTXO1-2FFcg6tHbuoVt2MQnJEZALmLc9IpT2UaUriFxrYN93Zy462ckQT7z5ZHf1vjKt7nBBIlDpaprU2BaTFgXfqrrnGpFe6FnQPERhI4vMFZHiFOmWpaiX1CAfk3lrNFqlQfE-2Br2tnUuFQwF4QTQzOZiiEHnwJhFmkglr0vRaC9CpMH3xwohWGgHaCKY82FGTRn8gLt99tWZvcBlKGYFopiISnkenq703OZ4-2FmHrc-2F5E7E-2FxUzuP0qbhoKwSZPGc9rBZmXe13xx0CjuRj6w4WxMUk-2FUVH5z9sAuugfkCnWzDQRs8pxRsi4HTDvpisTkPtBnUOd4LTA3B6zVo79DzwkF8bWyoEc80CBo-3D"]—a technology-accelerating water quality challenge focused on nutrient management.
- In August 2019, the EPA made available $1.2 million to 12 states as part of the Hypoxia Task Force to help implement state plans to reduce excess nutrients in the Mississippi River/Atchafalaya River Basin.

- In September 2019, the [HYPERLINK "https://www.epa.gov/newsreleases/epa-seeks-comment-new-policy-proposals-facilitate-market-based-opportunities-improve"] on policy options related to one of the principles in its water quality trading policy memorandum, encouraging simplicity and flexibility in implementing trading baseline concepts.
- In December 2019, the EPA announced the award of a $4 million cooperative agreement with Restore America's Estuaries to help fund projects supporting National Estuary Program (NEP) coastal watersheds and estuaries.

Actions Planned:

- The Office of Water will continue to scope-out the best approach for quarterly reporting for enterprise risk.
- Develop additional metrics to support quarterly reporting on nutrient reduction such as TMDLs, nine key element plans, or other watershed improvement plans coordinated with or approved by EPA to address nutrients; or Section 319 grants focused on reducing excess nutrients in watersheds.
- Clean Water Action Section 303(d) Lists which identify impaired and threatened waters in states are due April 1, 2020. The Office of Water will use data received from those lists to calculate improvements in water watersheds with surface waters identified as not meeting standards because of ~~quality in the watersheds that were listed as impaired by~~ nutrients as of August 2019.
- The Office of Water will send-out an FY 2020/2022 Integrated Report memo emphasizing the importance of on-time submittal of state integrated reports and EPA's review of 303(d) lists.
- Conduct Nutrient Finance Forums through the Water Finance Center. (Number of forums pending.)
- The Office of Water is planning to publish draft revised national numeric nutrient criteria recommendations for ~~-~~lakes and reservoirs in the conterminous United States in the 2nd quarter of FY 2020. These draft national criteria recommendations consist of models that provide total nitrogen and total phosphorus concentrations in lakes and reservoirs to protect three different designated uses – aquatic life, recreation, and drinking water source – from the adverse effects of nutrient pollution. These national models provide a flexible tool for deriving numeric nutrient criteria because states and authorized tribes can incorporate local data, when available, into the national models, helping them develop numeric nutrient criteria that are consistent with national relationships while accounting for unique local conditions.
- Through the EPA's N-STEPS program, we are currently providing technical assistance to nine states (Alabama, Arkansas, Arizona, Colorado, Florida, Idaho, Massachusetts, North Carolina, Oklahoma) and one authorized tribe (Coeur d'Alene Tribe, Idaho) to derive their numeric nutrient criteria, or numeric translators of narrative criteria. We are also scoping seven new N-STEPS projects in collaboration with nine states (Alabama-Georgia-Kentucky-Tennessee[1], Maine, Mississippi, North Dakota, South Carolina, Wyoming) and three authorized tribes (Pueblos of New Mexico[2]).

Commented [WA9]: Will need to break this down as noted in my comment above

Commented [MK10R9]: I've reworked this bullet. Hopefully it is more clear.

[1] AL-GA-KY-TN are collaborating together with EPA N-STEPS on a joint project.
[2] Three different Pueblos of New Mexico are collaborating together with EPA N-STEPS.